

be. Should any diseased bone tissue be left, you are sure to have trouble, a prolonged convalescence, and more or less temperature. After a thorough mastoid operation, when all diseased bone is thoroughly removed, the temperature, if any, will drop to normal and remain there. To illustrate the necessity of an early operation I will cite a few cases:

Mr. R—, referred to me by Dr. J. L. Butin of Madera, a large muscular man. Examination revealed perforated ear drum, with a discharge of pus from it. He had no pain over the mastoid at this time; at the second visit, a week or two later, on pressure over the mastoid antrum, I found at this time some pain. There was no swelling, no redness, and it was only by moderately hard pressure that there was much pain. None of the most marked signs of suppurative mastoiditis were present, but upon opening the mastoid, I found a very extensive necrosis of the bony structure, in fact involving the entire mastoid bone. The lateral sinus was exposed and found covered on the outside with granulations, the necrosis extending down to the dura. He made a rapid recovery. This case was followed by one almost exactly similar a week later from Le Grand, sent me by Dr. McMaster.

Here are two cases with no fever, redness or swelling over the mastoid bone and in which they were walking around attending to their work and yet with a most extensive and dangerous disease of the mastoid, showing that redness, swelling and fever are not necessary to a diagnosis of disease in the mastoid cells.

These two cases just cited had had a discharging ear for only two or three weeks. I now wish to call your attention to another class of cases more acute and rapid in their course.

A baby fifteen months old, sent to me from Hanford by Dr. Toner. Child had had suppurating ear for one month, suddenly showed slight swelling back of ear with very little redness, and there had been for two or three days previous, severe pain, but on appearance of swelling, pain most all ceased. (This relief of pain was due to the abscess perforating through the external bony wall, thus relieving the pressure.) On opening up the mastoid, I found a large abscess cavity in the body of the mastoid bone, which was thoroughly curetted out. The little patient made a quick and uneventful recovery.

Son of Mr. W—, sent to me by Dr. Rosson of Hanford, had been suffering with discharging ear for only four days, had never had trouble with ear previously. There was no swelling over mastoid, nor redness, but severe pain increased by pressure over the mastoid antrum was present. I advised immediate operation and operated the same evening he came in, notwithstanding the fact that the ear had been discharging for but three or four days. I found a large pus cavity in the mastoid bone. After thoroughly removing all diseased bone, he was put to bed and made an uninterrupted recovery. This case shows how rapidly the bone tissue of the mastoid may become diseased.

The main points that I desired to bring out in this short paper are, the fact that the disease of the mastoid bone may progress very rapidly, that redness and swelling are not the most important symptoms, but that pain, especially over the region of the mastoid antrum, is the most important symptom and that by an early operation much destruction of tissue and danger may be prevented.

If you will bear with me I will speak just a few words about the radical mastoid operation. I had

the pleasure of witnessing a great many of these in Prof. Politzer's Clinic in Vienna. It consists of removing practically all of the mastoid bone including the posterior wall of the auditory canal, and the ossicles. Then the posterior membranous wall of the auditory canal is made into a flap and the wound back of the ear is closed, the dressings forcing the flap back against the denuded bone, covering it, and the dressing being done through the external auditory meatus. The operation is a modified Stake operation.

This operation is done in chronic cases of suppurative ear disease, and in about 50 or 60 per cent of cases, cures the discharge altogether and certainly removes much of the danger attending a chronic suppurative process in the middle ear in all cases. There is some danger in doing this operation of injuring the facial nerve which should be carefully avoided. The chronic suppuration of the ears is, as I mentioned above, thought by many to be of no particular danger to the patient, but during the past year four deaths due to extension of the inflammation from the ear to the brain have come under my observation. The importance of this is well known by the old line insurance companies who will not accept as a risk an applicant having a discharging ear. I do not claim that every case of chronic suppurative ear trouble should be operated upon, but I do know that most of them would be much safer were it done. Private cases I find are hard to convince of the importance of having this done. But in the clinics of our large cities of this country and Europe, it is more commonly performed than the operation for the acute mastoid cases.

THE PURE MILK PROBLEM*

By GEORGE H. KRESS, M. D., Los Angeles.

The Chairman of the Pure Food Committee indicated in his report, some of the work undertaken at Los Angeles in the effort to secure a supply of pure milk.

The great value of milk as a food to infants and invalids makes it desirable to discuss the subject at greater length in this symposium. To tell the members of this Society that hundreds of lives are annually lost because of dirty milk is to state nothing new. And yet so long as the medical profession allows dirty and dangerous milk to be sold to those who do not know its menace to the health and life of loved ones, just so long should medical men be reminded of their negligence and responsibility in this most important problem.

I believe it may be safely stated that if medical men did their full part to educate the lay people concerning the danger involved in the use of dirty milk, that it would only be a short time before the use of such milk would be done away with. The laity does not consume dirty milk because it prefers

* Read as part of a Pure Food Symposium at the Thirtieth Annual Meeting of the State Society at Colorado, April, 1908.

it. It drinks it and allows infants and invalids to drink it, because it does not realize the danger therein, the medical profession not having done its full part in educating the laity in regard to this matter.

I believe that if we act unitedly, we can secure clean and safe milk for every city of California within five years. For what can be done in one place can be duplicated elsewhere, if the right forces are brought into action. Through our Pure Food Committees, (or better), Public Health Committees, as we hope to have them called, we possess the means whereby these ends may be attained. Place men who will work on your local public health committees, and they will be able to inaugurate a pure milk campaign in your county, without an over-great amount of effort.

There are two phases of the subject which we wish to briefly consider to-day:—certified milk and inspected milk.

By certified milk is meant milk from a healthy and tuberculin-tested herd gathered under such conditions as to keep the bacterial count down to a minimum so low as to indicate that the hygienic and sanitary conditions of the entire establishment are absolutely first class. In our certified dairy at Los Angeles the bacterial content must be less than 20,000 colonies to the cubic centimeter, but we hope to lower this in the future.

It is not possible in this brief talk to enumerate the many items which are necessary to attention by the dairyman, if he wants to produce a certified milk of known chemical and bacterial standard. The score cards which have been passed among you, give an idea of the factors to be considered.

It is most important that we should have milk of the certified standards, because infants and invalids should be given no other. Its extra cost, however, will prevent its universal use.

What is needed, therefore, above everything else is a safe milk, produceable at about the present prices and approximating as closely as possible, a certified milk standard. In other words, an inspected milk, so-called. By inspected milk is meant a milk inspected by city, or preferably, state officials, and conforming to the proper chemical standards as well as having a comparatively low bacterial count, say of 100,000 colonies to the cubic centimetre, instead of 500,000 or a million or millions, as is usually the case. Such a milk can be obtained, I believe, if we have a healthy herd and sterilized utensils.

The milk industry, so far as distribution to the consumer is concerned, has already fallen under the control of a few large dealers, and their creamery or collecting establishments are fitted with the steam and apparatus needed for sterilizing cans, bottles and other utensils. If we teach the small dairyman how to keep a well ventilated and clean barn, and clean corrals, and then instruct him to have the udders of the cattle and the hands of the milkers clean before milking, it will be possible to secure a pure and untainted milk from the cows and receive

the same into the previously sterilized cans without an over-great amount of contamination.

In other words, if this method could be put in vogue, it would be possible for us to obtain for the entire state of California, a milk almost equal in standard to a certified milk. All that is necessary is that we set about our task in the right way and show the large dealers and small dairymen alike, how this end may be obtained without much extra work and in the end, with more money profit to themselves.

But to obtain a milk of such standard inspectors are necessary, and a system of scoring dairies is necessary. The score cards which I have passed around are different from those shown last year. One year's experience with last year's form showed its typographical make-up to work against it, because the ordinary inspector was not able to comprehend and apply its suggestions.

To overcome this I devised with Dr. Powers, a form which, while occupying more space and more paper, is, however, so simply arranged that we believe that any ordinary inspector should be able to mark a dairy without much trouble.

The scheme is, I think, self-explanatory. The Pure Food Commission will take this matter up with the county public health committees later on. It is only necessary to add at this time, that without some such system of scoring dairies, it is impossible to develop sanitary dairies.

In conclusion we would present the following:

1. Dirty milk, and that is the kind the great majority of citizens of California are drinking to-day, owing to its bacterial contamination, is dangerous to the public health and is the cause of much sickness and death, particularly among infants.
2. The lay people of our state drink this milk which is a menace to their health and lives because the medical profession of California has not done its full duty in educating them concerning this danger.
3. When the laity are once educated concerning this menace to their health and lives, they will gladly co-operate in all intelligent and sane efforts for the production of a milk supply that is clean, pure and safe.
4. The logical persons to carry on this campaign of education are the members of the medical profession.
5. Through the Public Health Commission of this Society and the public health committees of the county units, we have the basic organization necessary to the inauguration and development of this work throughout the state.
6. The Public Health Commission serves notice on you at this time that it intends to push this particular work during the coming year, and that it counts on all members of the Society, individually and collectively, to co-operate.
7. Further, THE JOURNAL will contain notes of the work as it progresses. The Commission invites correspondence from those who are interested.